

REMARKS

Formal drawings are submitted herewith under separate Letter to the Official Draftsperson. Approval by the Examiner of these drawings is respectfully requested.

All the claims in the case were rejected citing a number of references, which will be discussed below. However, Applicants have deleted all the claims in this case and insert their new claim 42. Only claim 42 need now be discussed. What claim 42 sets forth, which is not found in the cancelled claims, is that, after receiving two or more source digital images that are provided by the film scanners from a particular film type, the method uses the pixels of the received source digital images to accumulate noise statistics related to particular combinations of film scanner and film type that produced the digital images. This noise characteristic is then used to enhance the digital images.

Claims 1-4 and 10-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of U.S. Patent 5,509,086 to Edgar et al. and U.S. Patent 5,959,720 to Kwon et al.

Claims 1 and 13 are independent claims. Both of these claims are directed to enhancing one or more digital images from a plurality of digital images that are believed to be affected by a common noise source. An important and unique feature of the present invention is the recognition that two or more source digital images can be used to calculate enhanced digital images for the one or more received digital source images. The pixels of the received source digital images are used to calculate a noise characteristic that relates to the noise present in the received digital source images.

Turning first to the Edgar et al. reference, Edgar et al. do, in one embodiment, have a plurality of digital images to accumulate statistics. Edgar et al. have no suggestion that these statistics can be based upon the combination of a particular film scanner and film type. This is discussed on page 14, lines 6-30 of the present application.

Edgar et al. measure cross correlation statistics from digital images and use the statistics to calculate a color correction matrix. Edgar et al. use their invention to remove the systematic color bleeding from one color to another. This

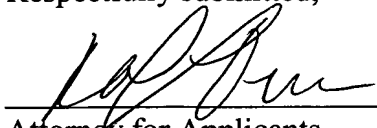
is not the type of noise corrected by the present invention, since it is present in all pixels. Edgar et al. do characterize their image enhancement process as having noise, but it is not the same type of noise correctable in the present invention, but rather color interactions caused by image source media and spectral response of an image scanner (column 1, lines 3-7). Edgar et al. do use noise in the film grain of an image, but not for the purpose of removing noise, but rather for providing better color reproduction. In any event, there is no motivation in Edgar et al. for using the combination of a particular film scanner and film type to calculate a noise characteristic as now set forth in claim 42.

The Examiner has also cited Kwon et al. to indicate that it is well known to enhance a digital image using multiple images. What Kwon et al. do, as recognized by the Examiner, is to scan a film strip having multiple individual frames and using such information to modify color. This is not noise, and there is no reason why one would combine Kwon et al. with Edgar et al. And even if they could be combined, they would not produce the noise characteristic of the present invention which are based upon a particular scanner and film type. Accordingly, it is believed new claim 42 sets forth unobvious subject matter. Synder et al. do discuss calculating updated noise characteristics from the combination of local noise and default noise characteristics, however Synder et al. do not disclose or suggest using the combination of a particular scanner and film type to calculate noise statistics used in enhancing the digital images. Ohta does discuss an adaptive spatial filter, but he does not disclose or suggest the use of a particular film scanner and film type to calculate a noise characteristic.

Applicants realize they have narrowed the scope of the invention and, if the Examiner has problems with this Amendment, Applicants' attorney would appreciate a telephone call.

In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the invention set forth in new claim 42. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,



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